

Intelligent NTU



FEATURES

- Intelligent Network Termination Unit (NTU)
- Interfaces supported:
 - V.35 at 56 kbps to 2.048 Mbps
 - X.21 at 56 kbps to 2.048 Mbps
 - G.703 unframed E1 at 2.048 Mbps
- Automatic activation/deactivation of remote and local loopbacks
- Supports clock loss detection on the X.21 or V.35 side and signal loss detection on the G.703 side
- Uses 32-bit error counters for diagnostics
- Alarm relay and alarm-in connectors
- Serial async RS-232 port for out-of-band management with DTE/DCE selectable switch

- Full SNMP management through RADview-HPOV
- Simple management through ASCII terminal
- Dial-in option for remote out-of-band management
- Dial-out for alarm report
- Enhanced diagnostics include:
 - User activated local and remote loopbacks
 - Integrated BER tester
 - Fractional T1/E1 inband loop

DESCRIPTION

- FCD-NTU is an intelligent Network Termination Unit (NTU) that includes two interfaces: network link and user link.
- FCD-NTU is available with either V.35, X.21 or G.703 interfaces for both DTE (network link) and DCE (user link).

- FCD-NTU supports dial-in and dial-out modem connections. These connections can be used for remote out-of-band configuration, monitoring and sending callout alarm messages using ASCII (terminal) or SLIP protocols.
- Setup, control and monitoring of status and diagnostics information can be activated via:
 - ASCII terminal connected to the async control port
 - SNMP management connected to the async control port.
- FCD-NTU has an internal SNMP agent and can be controlled by any generic SNMP station or by the RADview SNMP network management application.
- Maintenance capabilities include user-activated local and remote loopbacks at the network link and user link. The user can also activate a BER test for the network link. The network link responds to an ANSI FT1 RDL (T1E1.2/93-003) inband loop code, generated from the remote network in a specific bundle of timeslots allocated only to that port.
- When operating with CRC-4, E1 network statistics are stored in memory according to RFC-1406. The statistic information may be retrieved locally through the control port.
- Record of last 100 alarms is stored and available for retrieval. Each alarm is time stamped. Certain alarms in the alarm buffer activate the alarm relay. Alarm-in function enables FCD-NTU to receive alarms from external equipment.

FCD-NTU

Intelligent NTU

SPECIFICATIONS

DATA PORTS

- **Number of Data Ports**
Two (one network and one user)
- **Interface**
V.35, X.21, G.703
- **Connectors (per port)**
 - V.35: 34-pin female
 - X.21: 15-pin D-type female
 - G.703:
balanced (120Ω): 8-pin RJ-45
unbalanced (75Ω): 2-coax type
- **Data Rate**
V.35 and X.21: 56 kbps to
2.048 Mbps
G.703: 2.048 Mbps
- **Clock Modes**
DCE: RX and TX clock to DTE
- **Control Signals**
 - V.35
network: DSR, DCD, CTS
user: RTS, DTR
 - X.21
network: indication
user: control
 - G.703: LOS

CONTROL PORT (DCE)

- **Interface**
V.24/RS-232
- **Connector**
9-pin D-type, female
- **Format**
Asynchronous

- **Baud rate**
1.2 to 19.2 kbps, autobaud
- **Character**
8 bit no parity, 7 bit odd or even
parity

GENERAL

- **Diagnostics**
General:
 - Alarm-in indication
 - Alarm-out indicationNetwork link:
 - Local and remote loopback
 - Network clock detection
 - Inband code activated loopback
 - Network link BER testUser link:
 - Local and remote loopback
- **Indicators**
 - General: PWR (green), TST (yellow), ALM (red)
 - V.35 (all yellow)
network: DSR, DCD, CTS
user: RTS, DTR, TD, RD
 - X.21 (all yellow)
network: IND
user: CNT, TD, RD
 - G.703
network: LOS (red)
user: LOS (red), TD, RD (yellow)
- **Alarms**
Last 100 alarms are stored and
available for retrieval. Each alarm
is time stamped.

- **Alarm Relay**
Connector with three relay
contacts
- **Alarm In**
RS-232 signal level connector with
three relay contacts
- **Physical**
Height: 4.3 cm / 1.7 in
Width: 21.5 cm / 8.5 in
Depth: 24.3 cm / 9.5 in
Weight: 1.3 kg / 2.9 lb
- **Power**
100 to 240 VAC; 47-63 Hz
-48 VDC, nominal (-36 VDC to
-72 VDC)
- **Environment**
Temperature: 0-50°C / 32-122°F
Humidity: up to 90%,
non-condensing

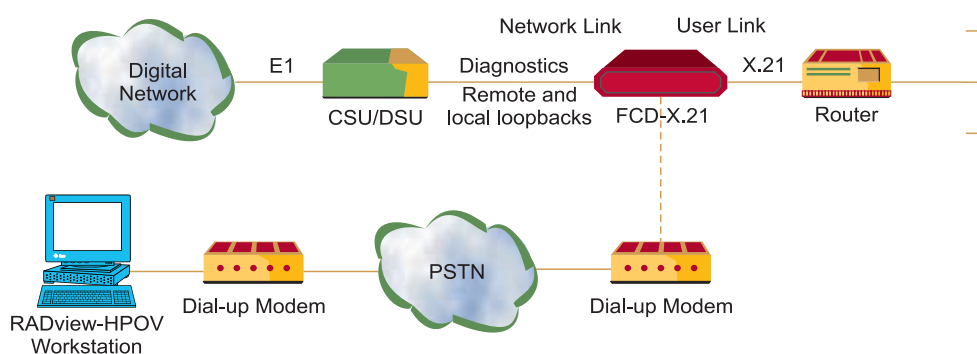
ORDERING

FCD-*/AC/*

Intelligent NTU

- * Specify interface link
V35 for V.35 interface
X21 for X.21 interface
G703 for G.703 interface

APPLICATION



End-to-End Management of E1 Access Services

RAD

data communications

www.rad.com

- **International Headquarters**
24 Raoul Wallenberg Street
Tel Aviv 69719, Israel
Tel: (972) 3-6458181
Fax: (972) 3-6498250, 6474436
Email: rad@rad.co.il
- **U.S. Headquarters**
900 Corporate Drive
Mahwah, NJ 07430
Tel: (201) 529-1100
Toll free: 1-800-444-7234
Fax: (201) 529-5777
Email: market@radusa.com

172-101-02/01